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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Eberhard Zielke

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LERNER GREENBERG STEMER LLP
P O BOX 2480
HOLLYWOOD, FL 33022-2480

EXAMINER

HIGGINS, GERARD T

ART UNIT

PAPER NUMBER

1794

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05/07/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/539,761	Applicant(s) ZIELKE, EBERHARD	
	Examiner GERARD T. HIGGINS	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,9 and 10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,9 and 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

1. Applicant's response filed 03/11/2009 has been entered. Currently claims 1, 3, 9, and 10 are pending, claims 2 and 4-8 are cancelled, and claim 10 is new.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 3, 9, and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 3, 9, and 10 recite the limitation "insulating material ***piece***" in the first line of each claim. There is insufficient antecedent basis for this limitation in the claims. The Examiner will interpret this limitation as "insulating material nozzle."

Claim Rejections - 35 USC § 102/103

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 3, 9, and 10 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Zielke (WO 99/65128), which is the international application for the US national stage patent 6,627,831, which is used herein as an English translation.

The Examiner notes the definition of the word “mixture” as seen on Merriam-Webster Online: “2: a product of mixing.”

The Examiner notes the following product-by-process limitation:

- The requirement in applicant’s claim 1 that the insulating material nozzle is made from **disposing a mixture** of first and second granules on the surface of a nozzle body, wherein said first granules have an increased electrical conductivity by being treated with radiation.

In order to be an “insulating material nozzle” as is claimed the disposed mixture must have had further operations performed in order to make the completed nozzle. This therefore means the claims are not drawn to a mixture of subvolumes on a surface, but rather a shaped nozzle derived from the claimed mixture of subvolumes disposed on a surface of said nozzle body. This is a product-by-process claim. It has been held that “even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is

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unpatentable even though the prior product was made by a different process.” Please see MPEP 2113 and *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). Any shaped nozzle that has the structural regions of conductivity will be held to anticipate or render obvious applicant’s claims.

With regard to claim 1, 9, and 10, Zielke discloses an “insulating component, which is at least partially composed of plastic, for high-voltage systems, in particular for use in gas-insulated systems, whose conductivity is increased in the region of its surface,” which reads on applicants’ insulating material nozzle and the intended use of claims 1 and 9 that the electrical high-voltage device is a high voltage power breaker (col. 1, lines 9-12). Zielke further discloses parts **9** and **10** of Figure 1.

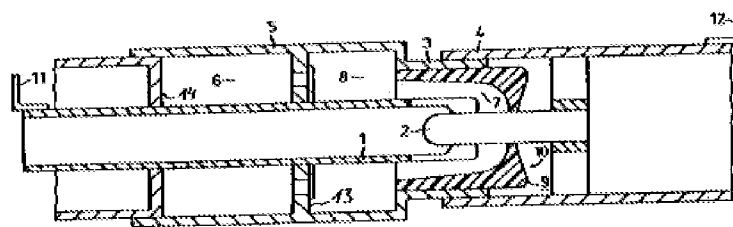


FIG 1

Part **9** is an “insulating component...which is normally composed of polytetrafluoroethylene,” which reads on applicants’ insulating material nozzle and applicants’ nozzle body (col. 3, lines 26-28). In order to prevent displacement currents and flashovers, the region of the end face **10** was treated with beta and gamma rays, “which leads to a reduction in the electrical resistance in the region which is subjected to irradiation” (col. 3, line 43 to col. 4, line 5). A reduction in the electrical resistance reads on applicants’ increased electrical conductivity. The end face region reads on

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applicants' channel formed in said nozzle body, and it also reads on applicants' surface of said channel. The Examiner deems this to be the case because the end face region gradually funnels down to the constriction area for the arc contact piece **2**. It is therefore a channel towards that constriction area for the arc contact piece **2**.

By controlling the energy of the treatment radiation, it is possible to define the depth from the surface to which the region of reduced electrical resistance extends (col. 4, lines 6-11), and it is also possible to control the extent of the change in the molecular structure (col. 4, lines 12-17). From this disclosure and the discussion above, the Examiner deems that the treatment with radiation occurs at the surface of the end face **10**, and therefore reads on said "mixture of first granules and second granules disposed on said surface and defining a portion of said channel" as claimed. The portions of the PTFE in the surface region of the end face **10** that are treated by the beta or gamma rays, i.e. change molecular structure, read on applicants' first granules and first subvolumes, and the portions of the PTFE in the surface region of the end face **10** that are not treated by the beta or gamma rays, i.e. do not change molecular structure, read on applicants' second granules and second subvolumes.

Although formed by a different process, the article of Zielke will have the same resulting structural features as the claimed invention. Those structural features are that the surface of a funnel shaped channel region will have treated and untreated subvolumes of PTFE.

With regard to claim 3, Zielke is silent with respect to the specific ratio of the treated component compared to the untreated component; however, Zielke discloses at

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col. 4, lines 6-17 that the penetration depth and intensity of the radiation can be varied in order to control the depth of the region of reduced electrical resistance and the extent of molecular change within the region, respectively. The Examiner deems that the insulating part of Zielke inherently comprises treated subvolumes embedded (< 50% in amount compared to the total amount of treated and untreated subvolumes) in the untreated subvolumes. This is necessarily true because in order to still be considered an insulating material piece it would necessarily contain more insulating components (2nd subvolumes) than conductive components (1st subvolumes), and hence the device anticipates applicant's claim 3.

Alternatively, it would have been obvious to one having ordinary skill in the art at the time the invention was made to vary the depth and intensity of the beta and gamma radiation to produce an insulating part having any amount of first subvolumes and second subvolumes, including the claimed amount, in order to have the proper amount of electrical resistance/conductivity to prevent an accumulation of surface charges.

It has also been held that "[o]nce the examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product." Please see MPEP 2113 and *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983). The Examiner has set forth a *prima facie* case that the article of Zielke would be the same or similar to the presently claimed article.

Double Patenting

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 1, 3, 9, and 10 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3 of U.S. Patent No. 6,627,831.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the resultant insulating piece is comprised of two subvolumes, including a first subvolume that has an increased conductivity, which partially lies on the surface of the insulating piece. The Examiner deems that the insulating part of Zielke inherently comprises treated subvolumes embedded (< 50% in amount compared to the total amount of treated and untreated subvolumes) in the untreated subvolumes, since

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in order to still be considered an insulating material piece it would necessarily contain more insulating components (2nd subvolumes) than conductive components (1st subvolumes); further, both subvolumes may be made of PTFE; however, the copending claims do not disclose a nozzle body with a channel having a surface, wherein the surface has a mixture of first granules and second granules disposed thereon.

Applicant's attention is drawn to MPEP 804 where it is disclosed that "the specification can always be used as a dictionary to learn the meaning of a term in a patent claim." *In re Boylan*, 392 F.2d 1017, 157 USPQ 370 (CCPA 1968). Further, those portions of the specification which provide support for the patent claims may also be examined and considered when addressing the issue of whether a claim in an application defines an obvious variation of an invention claimed in the patent. (underlining added by examiner for emphasis) *In re Vogel*, 422 F.2d 438, 164 USPQ 619,622 (CCPA 1970).

Consistent with the above underlined portion of the MPEP citation, attention is drawn to Figure 1 of the specification of Patent No. 6,627,831 which discloses the shape of the endface region **10**. It is clear that the endface region may be made in the shape of a channel that funnels down to the constriction area for the arc contact piece **2**. Therefore, it would have been obvious to one of ordinary skill in the art to make the copending endface region a channel and for treating the surface of that channel to result in an article that renders obvious the article as presently claimed.

Response to Arguments

9. Applicant's arguments, see Remarks, filed 03/11/2009, with respect to the rejection of claims 1-3 and 5-9 under 35 USC 102(b) over Burger et al. (5,403,524) have been fully considered and are persuasive. The rejection has been withdrawn.

Applicants' have amended to provide structure in claim 1 that is neither taught nor suggested by Burger et al.; furthermore, applicants' have cancelled claims 5-8, which renders the rejection of those claims moot.

10. Applicant's arguments filed 03/11/2009 have been fully considered but they are not persuasive.

Applicants' argue that their claims are not drafted in product-by-process format and that the Zielke reference does not teach all of the limitations of applicants' claims.

The Examiner respectfully disagrees and notes that applicants' claims were previously drafted in product-by-process format, and are now even more clearly phrased in product-by-process format as the insulating material nozzle is formed from a nozzle body with a channel having a surface and "a mixture of first granules and second granules ***disposed*** on said surface and defining a portion of said channel." The fact that a mixture of granules is disposed on the surface of a nozzle body is a product-by-process step in the making of an insulating material nozzle as claimed.

The Examiner notes that it has been held that "even though product-by-process claims are limited by and defined by the process, determination of patentability is based

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on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” Please see MPEP 2112 and *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985); furthermore, it has been held that “[t]he Patent Office bears a lesser burden of proof in making out a case of prima facie obviousness for product-by-process claims because of their peculiar nature” than when a product is claimed in the conventional fashion. *In re Fessmann*, 489 F.2d 742, 744, 180 USPQ 324, 326 (CCPA 1974). It has also been held that “once the examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product.” *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983). Please see MPEP 2113.

The Examiner has set forth a *prima facie* case that the resultant structure of the insulating material nozzle of Zielke anticipates or renders obvious applicants’ claimed invention. The Examiner deems this to be the case because the treatment with radiation occurs at the surface of the end face **10**, and therefore reads on said “mixture of first granules and second granules disposed on said surface and defining a portion of said channel” as claimed. The portions of the PTFE in the surface region of the end face **10** that are treated by the beta or gamma rays, i.e. change molecular structure, read on applicants’ first granules and first subvolumes, and the portions of the PTFE in

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the surface region of the end face **10** that are not treated by the beta or gamma rays, i.e. do not change molecular structure, read on applicants' second granules and second subvolumes.

Applicants are reminded that "the arguments of counsel cannot take the place of evidence in the record", *In re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965). It is the examiner's position that any arguments provided by the applicant regarding Zielke must be supported by a declaration or affidavit. As set forth in MPEP 716.02(g), "the reason for requiring evidence in a declaration or affidavit form is to obtain the assurances that any statements or representations made are correct, as provided by 35 U.S.C. 24 and 18 U.S.C. 1001".

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The Examiner has cited US 4,420,662, which is the US application related to CH 652528, and notes that nozzle **7** reads on applicants' nozzle. Also it is worth to note that the shape of the end face of this nozzle more clearly shows a funnel-shaped channel analogous to applicants' channel; however, the endface region of Zielke (US 6,627,831) still has a sloped funnel-shaped endface channel that reads on applicants' invention.

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The Examiner has also cited US 3,873,792, which shows in Figure 5 another channel region **16** that is made entirely of electrical conductive arc-preventing material, i.e. graphite.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GERARD T. HIGGINS whose telephone number is (571)270-3467. The examiner can normally be reached on M-Th 10am-8pm est. (Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Bernatz, acting SPE for Carol Chaney, can be reached on 571-272-1505. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kevin M Bernatz/
Acting SPE of Art Unit 1794
May 6, 2009

GERARD T. HIGGINS
Examiner
Art Unit 1794

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